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Recommended Citation

Datta, Monti Narayan, and Kevin Bales. "Slavery Is Bad for Business: Analyzing the Impact of Slavery on National Economies." *The Brown Journal of World Affairs* 19, no. 2 (Spring/Summer 2013): 205-23.

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Slavery is Bad for Business: Analyzing the Impact of Slavery on National Economies

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PUBLIC DISCOURSE ON HUMAN TRAFFICKING and modern-day slavery is reaching a tipping point—it is coming to be understood as a global problem with economic and policy implications far beyond simple reports of cross-border human trafficking. A decade ago most educated citizens considered slavery a phenomenon of the past, relegated to history textbooks. Today a strong narrative has reached global proportions: activists, epistemic communities, NGOs, IGOs, and governments are acknowledging the scope and extent of slavery in the twenty-first century. One need only point to Nicholas Kristof and Sheryl Wu Dunn's bestseller *Half the Sky*, President Barack Obama's 2012 speech at the Clinton Global Initiative, or the awareness that celebrities such as Mira Sorvino and Jada Pinkett Smith are raising about the subject to illustrate how far the antislavery movement has progressed.¹

Yet despite such civic mindedness, surprisingly little data and empirically driven research exist on slavery today. Although some headway has been made in estimating its prevalence—most notably in the form of contributions by Kevin Bales and by the International Labor Organization (ILO)—apart from a

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rough estimate of how many slaves exist in the world today (21 to 27 million), scholars and policy makers know little about the risk factors—let alone the business impact—that contemporary slavery has on the global community.² Indeed, most extant research, although useful, is qualitative, not allowing for statistical models.³ To what extent is slavery empirically bad for business? For whom is the business of slavery profitable, and for whom is it economically burdensome?

This article, using a novel dataset, demonstrates that slavery is empirically bad for business. Building upon the work of Robert Smith, our analysis examines the relationship between the prevalence of slavery in a country (in terms of the proportion of the population enslaved) and several economic measures (the

Slavery is objectively harmful for total economic output and social development.

United Nations Human Development Index, growth domestic product in terms of purchasing power parity, access to financial services, and the Gini coefficient).⁴ In each instance, controlling for alternative explanations, greater

levels of slavery are associated with a decline in economic growth and human development. The findings imply that beyond the morality of the issue, slavery is objectively harmful for total economic output and social development. This article begins with a discussion of how slavery is profitable for slaveholders and then proceeds with a discussion of how it undermines social and economic output at the macro level.

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CONTEMPORARY SLAVERY: PROFITABLE FOR SLAVEHOLDERS

A significant amount of historical and economic research has examined the slavery of the past and clearly demonstrates its profitability for slaveholders.⁵ As a legal enterprise, slavery in the past generated ancillary economic activity in the form of insurance, transport, advertising, loans, credit, mortgages, and so on. Governments could also tax proceeds from slave-trading and slave use and regulate the activities and procedures of slavery. Although a moral evil, historically slavery was good for business.⁶

Contemporary slavery, primarily due to its universal illegality, is a far different creature. The fundamental nature of slave work has not changed dramatically; it is still dirty, dangerous, and demeaning. Most slaves work in agriculture, mining or other such extractive industries, assembly, food processing, manufacturing, or what might be called “personal (forced) services” such as domestic service or commercial sexual exploitation. It is a type of work that tends to be hidden because it is illegal in all countries and condemned in international law

as *jus cogens*, a norm from which no derogation is ever permitted. As an illegal economic activity, it is restricted, at least nominally, in all nation-states. On a moral level, no rational politician would condone slavery today. Indeed, normatively, the twenty-first century is an age in which it is socially fashionable to wear T-shirts or display bumper stickers that promote the antislavery movement.

On the other hand, contemporary slavery, like its historical antecedent, yields certain economic benefits, albeit for a very small portion of the global economy. The ILO estimates that about \$44 billion USD per year is made in slavery-derived profits. Although this is a drop in the bucket of global economic output, valued at \$74 trillion, it suggests that, at least for illicit markets, there are incentives to perpetuate slavery.⁷ The profits of slavery flow primarily to slaveholders, who benefit from global markets and global prices. For example, a criminal who uses slaves to produce a cotton crop will sell his cotton at the same price as his neighbor who does not exploit slaves. They both receive the market price, one which is ultimately set in the global commodity exchanges. While both farmers receive the same price for their cotton, the slave-using farmer will have a higher profit margin due to his much lower labor cost, amounting to bare subsistence for his workers. With a guaranteed market price, he has no incentive to sell at a lower rate. As with many other criminal enterprises such as drug trafficking, the estimated profit margins found in contemporary slavery are sometimes astoundingly high.⁸

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Profit margins vary in contemporary slavery. At one end of the spectrum is the commercial sexual exploitation of enslaved women. Such an illegal—and extremely brutal—working-class brothel business has been found to generate profit margins in the order of 850 percent in the booming economy of Thailand, a locality with high levels of demand.

As Table 1 shows, the monthly profits from slavery in a working-class brothel in a small town in western Thailand are about \$72,000. Annually, this yields a net profit of \$864,000. Brothels serving richer clients or sex tourists might be expected to fare better. The fact that there are dozens of brothels in this small town alone suggests that enslavement for sexual exploitation is a multimillion-dollar business in the region.

At the other end of the spectrum are traditional forms of enslavement that tend to be part of a country's local economy. Brick kilns that rely on slave labor in rural Pakistan, for example, generate around 25 percent profit, compared to 10–15 percent for those kilns that pay their workers. At the same time, hereditary forms of collateral debt bondage with similar profit margins, practiced in agricultural slavery in northern India, remain extensive.⁹ Adding to the profitability of

contemporary slavery, regardless of the type of slavery, is the exceptionally low cost of acquiring slaves.¹⁰ For most of human history, slaves were expensive. In 1850, for example, the average price of an “average” slave in the American South (a “prime field hand” meaning a young man capable of heavy agricultural work) was between \$1,000 and \$1,200 in 1850 dollars, which equates to around \$45,000 in 2013 dollars.¹¹ Today it could be argued that slaves are less expensive today than at any time in the past. In a marketplace in the central region of the Ivory Coast, one researcher easily purchased two 19-year-old agricultural workers for about \$30 each. In India, bonded laborers are able to report precise sums that represent the acquisition cost required to enslave their family (often the debt being taken some generations previously and passed down)—ranging from as little as \$10 to over \$100. In Brazil desperate urban workers place themselves in the hands of recruiters only to find themselves held under violence far in the forests and charged with a “debt” amounting to a few hundred dollars. Even in Thailand, where teenagers are sold into prostitution and a premium is charged for their virginity and attractiveness, prices rarely go over \$1000.

208	Costs (per month)		Income (per month)	
	Rent	5,000	Commercial sex*	1,050,000
	Utilities & bills	2,000	Rent paid by prostitutes	600,000
	Food & drink	45,000	Sale of condoms	70,000
	Pimp's salary	7,000	Sale of drinks	672,000
	Cashier	7,000	Virgin premium	50,000
	Cook	5,000	“Interest” on debt-bond	15,000
	Bribes	6,000		
	Payments to taxis etc.	12,000		
	Beer & whisky	168,000		
	TOTAL COSTS	257,000	TOTAL INCOME	2,457,000
	(In US dollars)	(\$8,389)	MONTHLY PROFIT	2,200,000
			(In U.S. dollars)	(\$71,813)

*Average 14 clients per day at 125 baht per client for 20 prostitutes for 30 days.

Table 1. Monthly income and expenditures (in baht) for the always prospering brothel. U.S. figures adjusted for inflation for 2012. Source: Kevin Bales, Disposable People: New Slavery in the Global Economy (University of California Press, 1999).

Low initial acquisition costs means that slave owners neglect the welfare

of enslaved people since replacement can be more cost effective than care. The cost of slaves is now so low that they are often seen as disposable inputs into criminal enterprises rather than as capital investments.

TAINTED GOODS

Although slavery might benefit slaveholders, it negatively affects everyone else—ranging from slaves to the global consumer—in different ways. The negative impact for global consumers is not economic but moral and political. Slavery does not reduce or increase prices but does involve consumers in illegal and immoral activities. Many countries including the United States prohibit the importation of slave-made goods, and case law going back to the eighteenth century allows the confiscation of goods that circumstantially may have been involved in the slave trade. Adding to this is the repugnance expressed by most consumers at the idea of buying goods made by slaves, especially child slaves—and that repugnance is hard to avoid. Slaves are used in the production of many basic commodities that flow from the poor Global South to the rich North, as well as of some goods, such as tomatoes and oranges, produced and consumed in the North.¹² Originating from numerous countries, documented cases of slavery exist in the production of textiles, gemstones, apparel, and agricultural products.¹³ Coffee is sometimes grown using slave labor, and some sugar is harvested by slaves. In the Congo, for example, armed gangs enslave local people and force them to dig minerals such as coltan, cassiterite, wolframite, and tungsten. These minerals are then sold to exporters who send them to Europe and Asia where they are used to make components needed for the production of cell phones, computers, and other electronics.¹⁴ Slavery also creeps into financial investments when pension funds or mutual funds carry stock in companies that subcontract other companies that use slave labor.¹⁵

These modern, scattered, small-scale, and criminal slave-based enterprises contrast markedly with the relatively much larger economic organization of historical slavery, in which, as evil as it was, the economic benefits of the legal slave trade were diffused throughout local and regional economies. In the past, it could be assumed that a sizable proportion of commodities such as sugar and cotton was produced by slaves and that the profits from such enterprises would be cycled back through local, regional, and national economies along with the profits from other legitimate businesses.¹⁶

Today, however, the situation is more complicated in that it is slaveholders who primarily benefit from contemporary slavery. Consider the cocoa industry

in the twenty-first century. In the Ivory Coast, there are about 600,000 small family farms that grow cocoa, producing just under half of the world's supply.¹⁷ Young men, normally from neighboring countries such as Mali, migrate looking for work. In remote rural areas, some are tricked and enslaved into working on farms that grow a range of crops, including cocoa for export. While no one knows for certain how many of these farms use slaves, the percentage of farms using slaves is likely to be in the single digits.¹⁸ When the farmers sell their cocoa to wholesalers, the slave-grown cocoa is mixed with the free-labor cocoa, and there

The profits of slavery are retained by the slaveholder and are not passed up along the product chain.

is currently no way to tell the two apart. The farmer who exploits slaves and the farmer that does not will receive exactly the same price for their cocoa at the farm gate. In this way, the profits of slavery

are retained by the slaveholder and are not passed up along the product chain. The cocoa that is exported from the Ivory Coast to Europe and North America to be made into chocolate, used in other foodstuffs, or made into cosmetics is also mixed with cocoa from other countries; thus, it becomes even harder to distinguish the fraction that is tainted by slavery.¹⁹ This concealment of slave-made commodities, made possible through blending in global supply chains, also applies to cotton, sugar, gold, shrimp, and a host of other products. What the case of cocoa illustrates, and what applies to virtually all slave-based businesses, is that profits from slavery tend to accrue solely to the criminal slaveholder and are not passed up the product chain in the form of lower prices to consumers.

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THE EFFECTS OF SLAVERY ON HUMAN DEVELOPMENT

Contemporary slavery yields a number of negative social and economic effects. Slaves, subjects of violence and intimidation on a systematic basis, are unwilling agents of economic stagnation. From a fiscal perspective, slave labor tends to pull down the wages of free labor in the same area, thus lessening the disposable incomes of free families. At the same time, slaves are not able to play a full role in their local economy in that they have little or no purchasing power and so they subsist on the barest necessities.

More generally, slaves, by the nature of their social position, have no means to contribute to the economy except in minimal ways. They are not at liberty to purchase anything in a country's markets. Therefore, slaves, as a group—denied the benefits of human development in the form of education, access to political participation, and self-direction—remain an untapped economic resource.

Slavery generates a downward spiral of social and economic stuntedness. It is a social and economic cancer.

Only very recently did scholars begin to examine the impact of slavery on human development. In 2009 Robert Smith was among the first to analyze a number of factors that were thought to affect social and economic development as measured by the United Nations Human Development Index; these factors included corruption, regime type, internal conflict, national debt, geography, and culture.²⁰ For the first time in a study of contemporary nation-states, Smith included measures of slavery in the analysis of human development using an earlier version of data from Kevin Bales of Free the Slaves, the center for the modern abolitionist movement.²¹

Smith's study explored the impact that slavery might have on human development and provided insight as to how slavery might fit with other factors that are known to affect development. Given the large amount of work that has been done to explore determinants of development in the Global South, it was remarkable that, as Smith explains, "When the full range of the covariates are retained, and when the four categories of slavery are used to classify the regions, the resulting ... statistics imply that slavery explains much of the regional variability in the Human Development Index rank scores."²² Smith went on to identify the policy implications:

Among the covariates studied here, slavery (debt bondage, forced labor, forced prostitution, chattel slavery) and the lack of political freedom explain much of the variability that is between regions and corruption explains much of the variability among countries within a region. Additionally, countries with higher values of conflict and social unrest and higher values of national debt have significantly worse Human Development Index rank. To enhance human development countries should eliminate debt bondage and other forms of slavery, move toward fully democratic political systems, and eliminate corruption.²³

Clearly there can be mutually reinforcing relationships among these factors. These interrelationships point to the circular and reinforcing nature of human rights violations. In terms of human development and economic development, the result from Smith's analysis is clear: slavery impedes economies and societies even though the proportion of slaves in the global population is small, their productive capacity is small, and their economic value, as measured by price, has reached an all-time low.

THE RELATIONSHIP BETWEEN SLAVERY AND THE HUMAN DEVELOPMENT INDEX

The next step in this research agenda is to explore the empirical relationship between slavery and human development. A challenge arises, however, in obtaining data to approximate the prevalence of slavery around the globe. Estimates vary based on differing approaches that use secondary source estimates and country-level, random sample surveys. The ILO estimates that there are 21 million slaves in the world today. Based on the data used by this article, however, this figure is somewhat higher, upwards of 27 million.²⁴ Part of the reason for the discrepancy is in the transparency of the research methods made available.²⁵ As scholarship on human trafficking and modern-day slavery develops over time, the complete sharing of data and methods used will help resolve the difference observed in the number of slaves.

We begin by exploring the relationship between the prevalence of slavery and the UN Human Development Index (HDI). The HDI, as the UN reports, “is a summary measure of human development. It measures the average achievements in a country in three basic dimensions of human development: a long and healthy life (health), access to knowledge (education), and a decent standard of living (income).”²⁶ HDI is measured on an interval scale, from zero (representing “low development”) to one (indicating “high development”). We use data from the year 2012. For the 162 countries in our dataset for which we have a corresponding measure of slavery prevalence, we find that the measure of HDI has considerable range, with a minimum value of 3.04 percent (for the country of Somalia) and a maximum value of 95.5 percent (for Norway). Countries on average have an HDI score of 66.7 percent, which indicates “reasonably high development.”²⁷

Our first hypothesis is higher levels of the prevalence of slavery lead to lower levels of HDI, all else being equal. In other words, we believe that slavery is a powerful predictive factor in understanding cross-national variation in human development. We test this in two ways, first by observing the graphical relationship between the two variables (HDI and Prevalence) as Figure 1 illustrates.

In Figure 1, our measure of slavery is on the x axis (in which we have taken the log of this measure so as to normalize its distribution) and the HDI measure is on the y axis. Each dot in Figure 1 represents one of the countries in our dataset. Note the downward sloping shape of the graph, which suggests that, as we hypothesized, higher levels of slavery correlate with lower levels of HDI. Conversely, lower levels of slavery correspond to higher levels of HDI. A bivariate regression analysis yields that this finding is statistically significant at

the 0.001-level and explains about 55 percent of the variance we observe ($R^2 = 0.55$). This finding substantiates Smith's reasoning that slavery is a useful factor in understanding variation in social and economic development around the globe.

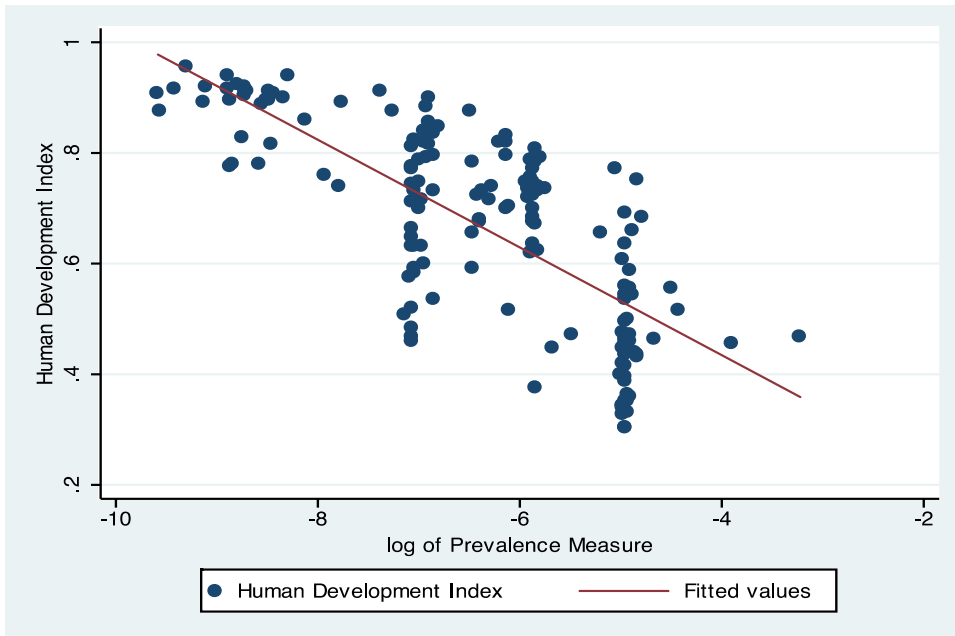


Figure 1. The relationship between the Human Development Index and slavery.

Of course, correlation does not imply causation. Simply because there is a strong bivariate relationship between HDI and slavery does not mean that the latter causes the former. Indeed, the relationship may be spurious. In this instance, to control for the possibility of a spurious relationship, it is important to account for other competing explanations that may shed light on cross-national variation in HDI, independent of slavery. If, while holding these other factors constant, the relationship between slavery and HDI maintains statistical significance, then we have greater support for our hypothesis. In this light we include three control variables, the first of which accounts for cross-national variation in literacy rates, given that scholarship suggests that education is a powerful predictor of human development and economic growth.²⁸ We measure education in terms of literacy (on a scale from 0 percent to 100 percent) from the United Nations Development Program.²⁹ The second variable examines cross-national variation in regime type, given that some scholars argue that higher levels of democratization lead to greater levels of productivity and growth.³⁰ We obtain data for this measure from Freedom House, which ranks all the countries of

the globe on a linear scale from 2 (“highly free”) to 14 (“not free”).³¹ The third variable captures cross-national variation in geography, given that differences in human development and productivity may be explained at least in part by geographic diversity.³² We account for this with dummy variables for Western Europe, North America, Central and Eastern Europe, Asia, Latin America, and the Middle East, using Sub-Saharan Africa as our baseline.

Slavery (log)	-4.487*** (0.532)
Literacy	0.546*** (0.0343)
Regime Type	-0.615*** (0.176)
Western Europe	-2.698 (1.750)
North America	-4.395 (13.85)
Central and Eastern Europe	-2.293 (1.945)
Asia	1.926 (1.688)
Latin America	-1.334 (1.756)
The Middle East	-1.295 (1.682)
Constant	-2.232 (4.014)
<i>N</i>	160
<i>R</i> ²	0.84

p* < 0.05, *p* < 0.01, ****p* < 0.001

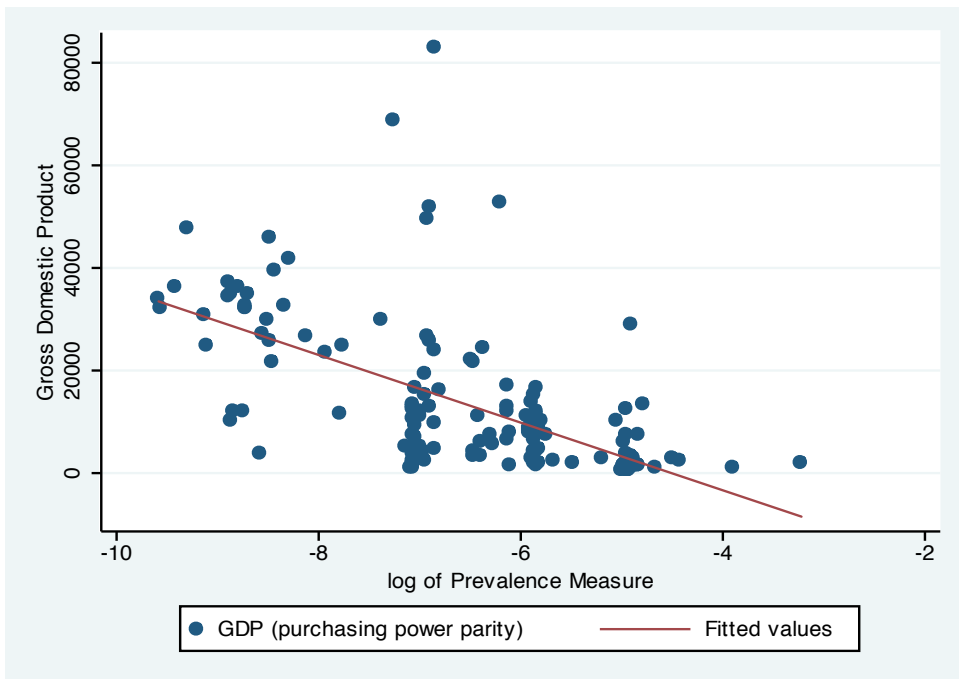
Table 2. Human development indicators (robust standard errors in parentheses).

Table 2 presents the results of our first multivariate model, in which we regress HDI on our slavery measure while controlling for literacy rates, regime type, and geographic variation. The results of Table 2 lend support for our hypothesis. Holding literacy rates, regime type, and geography constant, a one-percent increase in the prevalence of slavery is associated with a 0.045 percent decrease in human development, other things being equal. This finding is significant at the 0.001-level and lends credence to Smith’s claims. Two other

variables, literacy and regime type, also hold statistical significance.

Yet HDI does not capture total economic output, which prompts another question: What is the relationship between slavery and overall economic output? That is, to what extent does slavery influence the average person's ability to make a decent living on the macro level?

An excellent measure for economic output is gross domestic product (GDP) per capita in terms of purchasing power parity.³³ Countries vary considerably in terms of how much the average citizen makes. Following the logic of Smith, we argue that higher levels of slavery predict lower levels of GDP, all else being equal. This is our second hypothesis. We obtain data for GDP per capita from the World Bank's "World Development Indicators" using data from the year 2011.³⁴ GDP per capita varies considerably, with a minimum value of \$277 (for Somalia), a maximum value of \$82,978 (for Qatar), and a standard deviation of \$14,537. Figure 2 illustrates the relationship between slavery and GDP and casts support for our second hypothesis.



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Figure 2. The relationship between gross domestic product (GDP) and slavery.

Like the information presented in Figure 1, the data in Figure 2 illustrates a downward-sloping, negative relationship between the outcome we seek to understand (GDP per capita) and the key explanatory variable of interest (the

prevalence of slavery by country). A bivariate regression analysis reveals that the finding is statistically significant at the 0.001-level and explains about 39 percent of the variance we observe ($R^2 = 0.39$). A multivariate regression analysis (using the same control variables as we did for the HDI hypothesis) yields the following output.

Slavery (log)	-5260.3*** (734.8)
Literacy	143.0*** (41.38)
Regime Type	-148.8 (364.4)
Western Europe	2753.9 (3429.1)
North America	-3239.6 (2187.6)
Central and Eastern Europe	1475.0 (2631.1)
Asia	-2496.7 (2249.3)
Latin America	-3109.1 (2531.4)
The Middle East	204.8 (4837.5)
Constant	-31747.7*** (7178.9)
N	160
R^2	0.44
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$	

Table 3. Gross domestic product (robust standard errors in parentheses).

Table 3 sheds light on the extent to which the prevalence of slavery is associated with GDP per capita. Holding literacy rates, regime type, and geography constant, a one-percent increase in the prevalence of slavery is associated with a \$52.6 decrease in per capita GDP. Thus, a 10-percent increase corresponds to a \$526 decrease in GDP per capita—not a small sum.

At this point, it would be fair to ask if the measurement of slavery’s impact on GDP is sufficiently robust given that the criminal market is not normally included in any computation of GDP. Since the proceeds of the underground economy are untraceable and thus untaxable, how might their existence be alter-

ing our understanding of the influence of slavery on GDP? There is no perfect answer to this question given the lack of data on the size of untraceable criminal economic activity in each country, but in the case of slavery this uncounted output should not dramatically alter the results presented for two reasons. First, in virtually all economies, the estimated value of slavery within the criminal economy is much lower than the sums generated by drugs, weapons, gambling, and general corruption. Second, a significant part of slave-produced goods and economic activity are counted in GDP, but without the fact of slave origin being known. Note that cocoa, cotton, iron, shrimp and fish, and minerals for electronics can all have slave origin and still be counted in national output. The key point here is that it is the slavery that is hidden, not the export goods or the profits made on them.

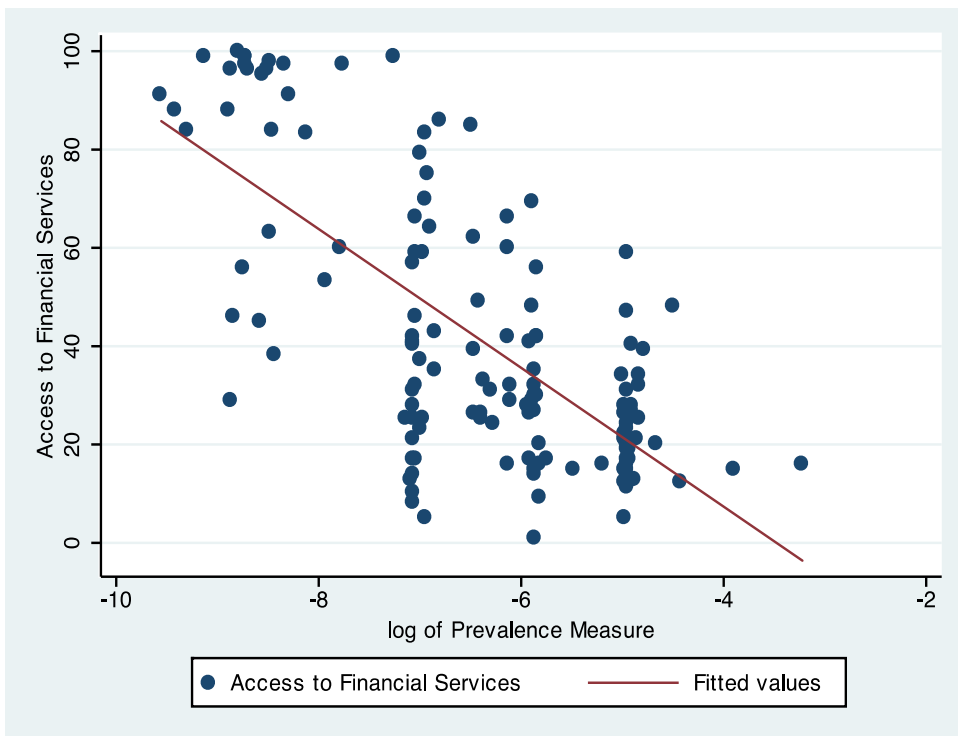
The key point here is that it is the slavery that is hidden, not the export goods or the profits made on them.

Regardless of whether HDI or GDP per capita is used, a story begins to emerge: slavery is associated with outcomes that are harmful not only for economic and social development (as HDI illustrates) but also for economic output per citizen (as GDP per capita illustrates). These are macro estimates. We are not arguing that the lives of most families and individuals are directly affected by slavery—far from it. However, from a systemic perspective, the evidence suggests that slavery significantly depresses social and economic output at the aggregate level. Based on these data, we find further reason to substantiate Smith's logic that slavery yields serious negative outcomes of global proportions despite the small ancillary benefits that a small population of contemporary slaveholders reap.

Let us press on with Smith's logic by exploring two more indicators of social productivity. One measure of interest is the access to financial services that the average citizen can obtain in a given country. Access to financial services is crucial for upward social mobility. Without access to credit, there is often little the average family can do to improve its lot in life. We obtain data for this measure from scholarship by Patrick Honohan, affiliated with the World Bank, Trinity College Dublin, and the Center for Economic and Political Research.³⁵ Honohan's research has generated a cross-national measure of access to financial services that ranks on a scale from 0 (no access) to 100 (full access). The descriptive statistics for this measure are interesting. The country with the lowest ranking is Kyrgyzstan (which received a 1), and the country with the highest is the Netherlands (which received a 100). The standard deviation is about 28 points, indicating a great deal of cross-national variation in this measure.

Our third hypothesis is higher levels of slavery will be correlated with lower

levels of access to financial service. We find graphical evidence of this in Figure 3.



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Figure 3. The relationship between access to financial services and slavery.

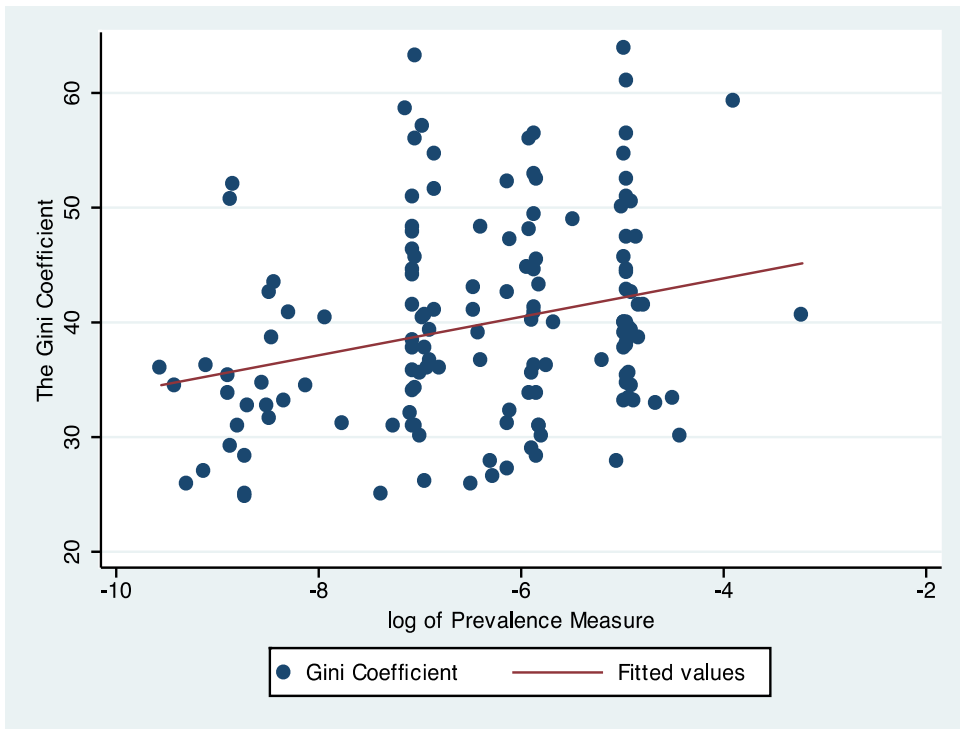
Similar to Figures 1 and 2, Figure 3 illustrates a downward-sloping, negative relationship between access to financial services (on the y axis) and the prevalence of slavery (on the x axis). A bivariate regression analysis informs us that this finding is also statistically significant at the 0.001-level and explains about 49 percent of the variance we observe ($R^2 = 0.49$). A multivariate analysis, as seen in Table 4, reveals that a one-percent increase in the prevalence of slavery is associated with about a tenth of a unit decrease in access to financial services. Thus, a ten-percent increase in slavery corresponds to about a one-unit decrease in access to financial services, other things being equal.

Once again, the data points to the destructive social and economic consequences of contemporary slavery, but it is important to reflect on the circular nature of this particular relationship as well—lack of access to credit can place poor families in extreme vulnerability to enslavement in times of crisis, in which individuals and families are removed from the credit market, cut off from ever being credit consumers.

Slavery (log)	-10.54*** (1.515)
Literacy	0.123 (0.0891)
Regime Type	-2.514*** (0.428)
Western Europe	2.675 (4.213)
North America	20.83* (10.33)
Central and Eastern Europe	5.492 (4.690)
Asia	-3.856 (5.112)
Latin America	-9.024 (5.099)
The Middle East	-7.879 (5.356)
Constant	-17.56* (8.821)
<i>N</i>	139
<i>R</i> ²	0.64
* <i>p</i> < 0.05, ** <i>p</i> < 0.01, *** <i>p</i> < 0.001	

Table 4. Access to financial services (robust standard errors in parentheses).

The last measure we explore is the level of economic equality/inequality in the world today. There is evidence of a growing gap between the Global South and the North. As the rich countries get richer, the poor countries get poorer. Our fourth hypothesis is that greater levels of slavery should be correlated with higher levels of global inequality. The measure we use to test this is the Gini coefficient, the data for which we obtain from the World Bank.³⁶ The Gini coefficient is a measure of income inequality, on a scale from 0 to 100, where 100 represents perfect inequality and 0 signifies perfect equality. Thus, a lower score on the Gini coefficient scale is better than a higher score. Among the data we have, the country with the highest amount of income inequality is Namibia (a score of 63.9) and the country with the lowest income inequality is Denmark (24.7).



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Figure 4. The relationship between the Gini coefficient and slavery.

Figure 4 suggests that Smith's thinking bears out: there is an upward-sloping, positive relationship between the Gini coefficient (on the y axis) and our measure of the prevalence of slavery (on the x axis). Higher levels of slavery correlate with greater levels of economic inequality. Although this finding is significant at the 0.001-level, the R^2 compared to those of the other models is quite modest, explaining only about seven percent of the variance we observe. A multivariate analysis, similar to the results of Tables 2, 3, and 4, reveals that our measure of slavery prevalence is significant at the 0.10-level in its association with the Gini coefficient, holding literacy, regime type, and geography constant.

CONCLUSION

While slavery may make high profits for a small number of slaveholders, we argue that the practice tends to disproportionately depress a country's economy. Since the work of slaves is generally concentrated at the lowest end of the economic ladder in basic, low-skill jobs that are dirty and dangerous, slave output contrib-

utes little to national production. Slaves are normally not able to acquire assets or access credit and just as it is for the free working poor, credit access and asset acquisition are key determining factors for achievement of economic autonomy. Except in the way they benefit criminals, we assert that slaves, though practically invisible, exert a strong, negative pull on local and national economies through their lack of full economic participation.

At the same time, there is a fruitful area for future research in the positive impact on local, regional, and national economies that coincides with the liberation of those in slavery. Recent longitudinal research by Free the Slaves among villages in northern India that have high levels of hereditary debt-bondage slavery demonstrates a dramatic increase in economic activity (as well as human development measures) following liberation.³⁷ The eradication of slavery has long been sought on moral and philosophical grounds; this new research suggests that the rationale for liberation might be extended to economic ends as well. While slavery tends to deaden economic activity, it appears that liberation may be an important economic stimulus. This is important because the resources needed to reduce global slavery, while relatively small when compared to other social problems, are not forthcoming.³⁸ The idea that the eradication of slavery might ultimately pay for itself through economic growth is one that needs demonstration. If “slavery is bad for business” is a hypothesis worth exploring, how much more so is its mirror assertion that freedom from slavery generates economic growth? 

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NOTES

1. “President Barack Obama speech to Clinton Global Initiative,” *Politico*, September 25, 2012; “Human trafficking: Mira Sorvino fights against modern-day slavery,” *Politico*, December 6, 2012; “Jada Pinkett Smith Hosts Sex-Trafficking Awareness Party,” *CBS News*, October 30, 2012.

2. For example, see: Kevin Bales, “International Labor Standards: Quality of Information and Measures of Progress in Combating Forced Labor,” *Comparative Labor Law and Policy* 24, no. 2 (2004); “21 Million People are Now Victims of Forced Labour, ILO says,” International Labour Organization, June 1, 2012.

3. For example, see: Elżbieta M. Goździak and Micah N. Bump, “Data and Research on Human Trafficking: Bibliography of Research-Based Literature,” October 2008.

4. Robert B. Smith, “Global human development: accounting for its regional disparities,” *Quality and Quantity* 43, no. 1 (2009).

5. For example, see: Robert Fogel, *Without Consent or Contract: The Rise and Fall of American Slavery: Evidence and Methods* (New York: Norton, 1992); Robert Fogel and Stanley Engerman, *Time on the Cross: The Economics of American Slavery* (New York: Norton, 1974).

6. Of course, in no way do we condone the slavery of the past, as we see the morality of the issue as the most important consideration. Slavery is a bloody and costly issue over the long term and can destroy the fabric of a nation.

7. If these estimates are correct, the monetary value of slavery represents 0.00059 percent of the global economy.

8. For a full discussion of the nature of and profits derived from slave-based businesses, see: Kevin Bales, *Disposable People: New Slavery in the Global Economy* (Berkeley: University of California Press, 1999).

9. Ibid.

10. The acquisition cost of slaves has decreased rapidly in the past 50 years. While once tending to be treated as capital purchase investments, slaves today can be acquired for around \$3,000 to \$8,000 in the richer developed countries, and as little as \$20 in the poorest countries. For a full discussion of the fall in acquisition cost of slaves, see: Kevin Bales, *Disposable People*.

11. We are indebted to Junius Rodriguez for helping us understand these comparisons.

12. Kevin Bales and Ron Soodalter, *The Slave Next Door: Human Trafficking and Slavery in America Today* (University of California Press, 2009), 44–47.

13. Ibid., 137–59.

14. Ibid.

15. Ibid.

16. Gene Dattel, “When Cotton Was King,” *New York Times*, March 26, 2011. For example, as Dattel explains, “The number of slaves increased from 700,000 in 1787 to over 4 million on the eve of the American Civil War; approximately 70 percent were involved in some way with cotton production. Indeed, so closely tied were cotton and slavery that the price of a slave directly correlated to the price of cotton (except during years of excessive speculation).”

17. Kevin Bales, *Ending Slavery: How We Free Today's Slaves* (Berkeley: University of California Press, 2007), 184.

18. Ibid.

19. Ibid.

20. Robert B. Smith, “Global human development: accounting for its regional disparities,” *Quality and Quantity* 43, no. 1 (2009); United Nations Human Development Index, United Nations Environmental Programme, <http://hdr.undp.org/en/statistics>.

21. “Home Page,” Free the Slaves, <http://www.freetheslaves.net>.

22. Ibid., 25.

23. Ibid.

24. For the most recent published estimates of slavery from Bales, see: “The Social Psychology of Modern Slavery,” *Scientific American*, April 24, 2002. More updated figures on the prevalence of slavery are forthcoming.

25. To date, the ILO has not made its data publicly available nor has it submitted its estimates of slavery to an academic journal for peer review.

26. “Frequently Asked Questions (FAQs),” UN Human Development Index (HDI), <http://hdr.undp.org/en/statistics/hdi>.

27. Although we are indebted to the United Nations for the data it has made available in its Human Development Index, we find it normatively troublesome that some countries can be more “developed” than others. This, in our opinion, smacks of classism, but that is a matter for another paper.

28. For example, see: Robert J. Barro, “Education and Economic Growth” (OECD, 2001), <http://www1.oecd.org/edu/country-studies/1825455.pdf>.

29. “International Human Development Indicators,” United Nations Development Program, <http://hdrstats.undp.org/en/indicators/101406.html>.

30. For example, see: Adam Przeworski, Michael E. Alvarez, Jose Antonio Cheibub, and Fernando Limongi, *Democracy and Development: Political Institutions and Well-Being in the World, 1950–1990* (Cambridge University Press, 2000).

31. “Home Page,” Freedom House, <http://www.freedomhouse.org>.

32. For example, see: John Luke Gallup, Jeffrey D. Sachs, and Andrew D. Mellinger, “Geography and Economic Development,” (working paper, National Bureau of Economic Research), <http://www.nber.org/papers/w6849>.

33. Purchasing power parity allows us a more standardized way of making comparisons in wealth across countries.

34. “World Development Indicators,” World Bank, <http://data.worldbank.org/data-catalog/world->

development-indicators.

35. Patrick Honohan, "Cross-Country Variation in Household Access to Financial Services" (prepared for the conference "Access to Finance," Washington, D.C., March 15–16, 2007), http://siteresources.worldbank.org/INTFR/Resources/Cross_Country_Variation_In_Household_Access.pdf; Patrick Honohan, "Resume," Trinity College Dublin, <http://www.tcd.ie/Economics/staff/phonohan/>; "Home Page," Center for Economic and Policy Research, <http://www.cepr.net>.

36. "Gini Index," World Bank, <http://data.worldbank.org/indicator/SI.POV.GINI>.

37. "Baseline study of slavery and poverty in Kukrouthi village, St. Ravidas Nagar District, Uttar Pradesh, June 2010" (internal research report, Free the Slaves, Washington, D.C.); "Follow Up Study of Slavery and Poverty in Kukrouthi village, St. Ravidas Nagar District, Uttar Pradesh, June 2012" (internal research report, Free the Slaves, Washington, D.C.).

38. Bales, *Ending Slavery: How We Free Today's Slaves*, 55.